ACEWELL Bike Computer

ACE-3252/3968-XX User Manual

Thanks for purchasing this ATV/Motorcycle computer. This manual is specifically designed for ACE-39XX-XX series ATV/Motorcycle computers. The ACE-3252 does not have any extra LED indicators. The ACE-395X-XX series has 4-8 LED indicators. ACE-3968-XX has aluminum CNC cases and ACE-395X has plastic housing. Different model has different LED indicators; all other functions are the same. You may find that the photo has a set of LED indicators different from your computer; the photo is for reference only.

PANEL DESCRIPTIONS

1. Tachometer Scale
2. Bar Tachometer
3. 1st row: Current & Max. Speedometer
4. 2nd row: Other functions
5. RESET Button
6. MODE Button
7. Fuel Bar
8. Thermometer Bar
9. Rpm Warning Indicator
10. Temperature Warning LED

Different model has different LED indicators, each indicator symbol means as bellows:

FEATURES

- Displays bar-graphic tachometers, speedometer, bar fuel meter, bar thermometer, digital gear indicator, speed pacer and one of other functions at the same time.
- Optional bar-graphic tachometer scale of 8,000rpm or 16,000 rpm for different bikes.
- Allows end user to adjust odometer when the odometer is less than 30 km, after that the odometer is always stored in memory even when the power is off.
- The main unit built-in 4-8 LED indicators for different purpose application.
- Three options fuel meter input resistance 100, 250 and 510Ω are available.
- Universal speed sensing circuit for reed sensor and hall sensor.
- Includes bracket, RPM sensing wire, speed sensor, thermo sensor, fitting kits and wiring harness.
- Water resistance, vibration (10G) and mechanical shock (100G) resistances tested.

SPECIFICATIONS

FUNCTIONS	SYMBOL	Specifications	Increments
Bar Tachometer		250-8,000 rpm 500-16,000rpm options	250rpm 500rpm
Digital Tachometer	rpm	10-19,990 rpm,	10rpm
Speedometer		2.4-399.9 km/h (248.5 MPH)	0.1km/h or MPH
Digital Thermometer	℃ or ℉	+50℃-180℃ / 122℉-356℉	1℃ /℉
Bar Temperature Meter	bar	1-7 Bar-graphic	
Maximum Thermometer	MAX ℃/℉	+50℃-180℃ / 122℉-356℉	1℃ /℉
Trip meter 1&2	TRIP 1&2	0.0-9999.9 KM/Miles	0.1 Km/Miles
Odometer	ODO	0.0 - 99999.9 KM, 0.0-62499.9 Miles	0.1km/miles
Maximum speed	MAX	2.4-399.9 KM/h (248.5 MPH),	0.1km/h or MPH
Average speed	AVG	2.4-399.9 KM/h (248.5 MPH),	0.1km/h or MPH
12/24 Hour Clock		0:00' – 11H59'/23H59'	1 Minute
Riding timer	RT	0-99H59`59``	1 second
Total Riding Timer	TT	0-9999H59'	1 Minute
Voltage Gauge	V	6.0-36.0 Volt	0.1V
Bar-Fuel Meter	BAR	100Ω, 250Ω, 500Ω options	
Digital Gear Indicator		n-8 gears	

Power Input	DC 12V
Tachometer Sensor	CDI or Ignition Coil Signal
Speed Sensor	Reed or Hall-effect Sensor
Temperature Sensor	Thermo Sensor
Wheel circumference setting	1mm-3999mm
Dimensions	130x78x30.5mm (ACE-395X-XX) 125x78x28.5mm (ACE-395X) 95.2x72x27mm (ACE-3250)
Operation Temperature:	-20°C - +80°C (inner housing)
Storage Temperature:	-30°C - +90°C (Inner housing)

FUNCTIONS

BAR RPM: Bar Graphic Tachometer
The bar tachometer has 8,000rpm and 16,000rpm options.

RPM: Digital Tachometer
1. It displays digital tachometer up to 19,900RPM.
2. Tachometer signal can pick up from either CDI or Sparking plug.

: Shift Warning RPM
1. The function enables you to set up a shift warning RPM.
2. Shift warning LED indicator flashes amber when RPM reaches 500rpm in front of the setting value, then flashes red when RPM reaches setting value, and stop flash after you shift gear.

MAX RPM: Maximum Tachometer
Displays highest tachometer achieved after last Reset operation.

SPD: Speedometer
Displays speed meter up to 399.9 Km/H or 248.5 MPH.

MAX: Maximum Speed Meter
Displays highest speed achieved after last Reset operation.

AVG: Average Speed Meter
It calculates average speed from last RESET.

TRIP 1&2: Trip Meter 1 & 2
1. TRIP function accumulates trip distance from last RESET as long as bike is being ridden.
2. Trip 2 will be reset to zero automatically when last fuel bar flashes.

ODO: Odometer
ODO accumulates total accumulated distance traveled during bike moving.
ODO data is adjustable when it is less than 30km (Miles), after that it stored in memory and couldn't be reset.

RT: Riding Timer
1. Calculates total operation time from last RESET.
2. Count automatically begins with movement.

TT: Total Riding Timer
1. Calculates total operation time from the beginning of the bike.
2. TT data is stored in memory, and couldn't be reset.

: 12/24 hour Clock
Displays 12 or 24 hour current time.

Bar Thermometers:
Have 7 bars to indicate engine temperature and always displayed. The warning LED indicator flashes to remind rider.

℃/℉: Digital Thermometer

1. It displays -L-℃ or -L-℉ when temperature is lower than 50℃ or 122℉, and displays -H- ℃ or –H-℉ when temperature is over 180℃ or 356℉.
2. The LCD screen will automatic change to temperature screen and flashes the digits of temperature when the thermo sensor detects temperature over the presetting warning temperature; The MODE key is out of function until the temperature cooling down and lower than the presetting warning temperature

MAX ℃/℉: Maximum Thermometer
Displays highest temperature achieved after last Reset operation.

Speed pacer:

Displays ▲ when current is higher than average speed and indicates ▼ when current speed is less than average speed from last Reset operation.

Volt: Digital Voltage Gauge

It is to check bike's battery and charging systems health.

: Fuel Meter

1. Built-in 100, 250 and 510Ω fuel sender resistance for you, the fuel bar will disappear in case the wires does not connect to fuel sensor before power on.
2. Have 7 bars to indicate how much fuel remains.
3. Last bar flashes to indicate low fuel level automatically.

Gear Indicator:

It compares speed and tachometer and indicates estimated digital gear position 1, 2… or N.

BUTTON OPERATIONS

MODE BUTTON

Press the MODE button to move all functions in loop sequence from one function screen to another when the speed sensor does not detect any signal input.

Press the MODE button to move partial functions in loop sequence when speed sensor detects signal input

Functions of MAX Speed, MAX RPM, MAX Thermometer and TT are hiding during riding. These data appears when stop riding.

RESET BUTTON

1. Press MODE button to the desired screen then press RESET button for 2 seconds to reset Trip 2, MAX, MAX thermometer and MAX RPM data from stored values to zero individually.
2. The data of Trip 1, AVG & RT be reset at the same time when one of the 3 data functions is being reset. The Trip 2 will be automatic reset when fuel meter reaches the last bar and flashes the bar.
3. ODO, clock and TT data cannot be reset.

SHIFT WARNING RPM OPERATION

1. Press MODE button to the RPM screen; pull on the throttle until the desired shift warning RPM.
2. Press RESET button to confirm and set up the shift warning RPM.
3. Bar-graphic tachometer and warning LED will flash to warning you shift gear.
4. Press RESET button for 2 seconds at the RPM screen to re-adjust the shift warning RPM.

Thermometer Warning

1. The LCD screen will jump to temperature screen automatically when the sensor detects temperature higher than the presetting warning temperature.
2. The thermometer digits and warning LED flash, and both buttons are out of function during over temperature.
3. Stop engine until temperature cooling down to below presetting warning temperature, both buttons recover to work.

WHEEL CIRCUMFERENCE TABLE

1. The details below have been calculated using following formula: Tire Diameter (inches) x 25.4(mm/inches) x 3.1416 = wheel circumference (in mm).
2. Identify the tire size of your ATV/Motorcycle when you need to change different tire size and key in the corresponding number shown in the following chart.

Tire Size	Circumference number (mm)	Tire Size	Circumference number (mm)	Tire Size	Circumference number (mm)
15 inch	1197	19 inch	1516	23 inch	1835
16 inch	1277	20 inch	1596	24 inch	1915
17 inch	1357	21 inch	1676	25 inch	1995
18 inch	1436	22 inch	1756	26 inch	2075

Clock, RPM, Wheel, Unit, Temperature and fuel meter SET UP

1. Setup operations include 12/24hour clock, bar rpm scale, shift warning RPM, numbers of engine rotation per signal, wheel circumference, units, odometer adjustment, units of temperature and temperature warning. These must be set up step by step. The computer will be automatic reversion to main screen if no button operation for 75 seconds at any setting screen.
2. Connect the fuel and thermo sensors to main unit firstly before power on, otherwise the LCD screen does not display both functions.
3. Press both MODE & RESET buttons to go into setting screen. In setting screens, each press RESET button to add the flashing digit by 1 or convert units, press MODE button to confirm the digit setting and jump to next digit or next setting screen to be set. Press MODE button for 2 seconds at any setting screen to finish the setting and go to main screen.
4. It displays "12 or 24H and XX:XX-XX" symbols as well AM/PM in case you select 12H. Operates buttons as descriptions of item 3 to finish clock setting and jump to 8,000/16,000rpm scale setting.
5. It displays 8,000rpm scale, press RESET button to convert 8,000 or 16,000rpm. Press MODE button to confirm the setting and jump to shift RPM warning setting.
6. It displays "RPM rXXX00". Follow the item 3 of button operation to finish the shift RPM warning setting and jump to engine specification setting.
7. It displays "SPC-X.X RPM", the default value is 1.0; there are 4 options: 1.0, 2.0, 3.0 and 0.5. It means the numbers of engine rotation per signal. For example the value 2.0 means the engine rotate 2 turns to output a signal.
8. Press RESET button to move in loop sequence from one to another value of the 4 values. Press MODE button to confirm the setting and go to wheel circumference setting screen.
9. In "cXXXX" display, "c" means "Circumference", following 4 default digits; flashing digit is digit to be set. Follow the item 2 of button operation to finish the wheel circumference setting and jump to unit setting.
10. It displays KM/h or MPH, each press of RESET button converts unit; press MODE button to confirm unit setting and jump to odometer setting.
11. It displays "ODO & 00000X km", the "X" is tested odometer in factory, follow item 3 to setting a desired odometer and jump to thermometer unit setting. This setting screen will disappear when the odometer is over 30km or your setting is over 30km and returned to main screen.
12. It displays " ℃ or ℉", each press of RESET button converts ℃ or ℉; press MODE button to confirm temperature setting and jump to temperature warning setting.
13. It displays "XXX" and the selected unit. Follow the item 3 of button operation to finish the temperature warning setting and go to fuel sensor resistor setting.
14. It displays "100r" and fuel tank symbol, follow the item 3 to select 100, 250 or 510ohm and return to the main screen. The fuel meter bar will disappear if you do not connect the fuel wire.

Press 2 Seconds.
Mode Button, RESET Button

INSTALLATION & PARTS

Main Unit Installation:

Spring washer

Nut

Sensor wire, Vibration Direction

RPM sensor mounting: RPM Input, Either one

1. **Signal intensity from ignition coil is dependent on vehicle type.**
2. **Circles 2-5 turns around ignition coil, with more turns creating steadily stronger signal, fewer turns creating weaker signal.**
3. **The RPM circuit is designed for most bikes, however partial bikes' signal is too strong if the RPM looks like much more than actual RPM and unstable, please serial connect the attached 1M Ohm resistor to solve it.**

We have several speed sensors; the unit includes one of them or not speed sensor in case the model has to be connected to gear box to get speed signal.

Reed Speed Sensor and Magnet:

4. This sensor is universal sensor for motorcycle, find a rotatable part to install magnet and a location can install sensor and can be aligned to the magnet.
5. Align the center of the magnet to either of the sensor marking lines or the side of the sensor.
6. Installing the sensor parallel to the vibration direction creates optional anti-vibration effect.
7. Make sure the gap between the magnet and the sensor is within 8mm.

Hall Effective Speed Sensor and Magnet:

1. This is universal sensor for ATV rear wheel installation or motorcycle front wheel installation as if you purchase a relative speed sensor holder.
2. Find a part can rotate to install magnet and a location can install sensor and the sensor can be aligned to the magnet.
3. Align the center of the magnet to center of side face of the sensor.
4. Make sure the gap between the magnet and the sensor is within 5mm.

Specific Hall sensors:

The sensor such as Honda CRF, XR….etc. can replace original sensor cable and fix it at the original position.

Thermo Sensor and Sensor Tube:

1. The unit includes a water temperature sensor; you have to purchase a suitable water pipe temperature sensor tube to install the sensor easily.
2. Cut the water pipe, insert the temperature tube into the pipe and secure it by attached pipe clamps.
3. Screw the sensor into the tube.

GEAR INDICATOR SETUP

The digital gear indicator calculates the ratio of speed vs engine rpm, and displays digital gear position, there are various factors effect the calculation, the gear indicator response slow than the actual gear shift.

Please set wheel circumference and "SPC" of tachometer firstly, then check if tachometer and speedometer are running stable, the setting process can go on after connected Neutral wire and if both meters work stable.

Start the engine at neutral gear status, try to let the wheel installed speed sensor can rotate and the speed can be displayed on the LCD. Leave the engine running throughout the setting procedure.

1. Setup operations must be set up step by step. In setting screens, each press RESET button to add the flashing digit by 1, press MODE button to confirm the digit setting and jump to next gear setting mode.
2. Press and hold MODE button for 2 seconds at the digital RPM screen to go into the total number of gears setting screen.
3. The default number of gears is 6, the range is from 4 to 8 gears dependent on your bike. Operation as item 1 to confirm the total gears setting and jump to gear ratios setting screen.
4. The gear ratios setting must be set from the 1st gear step by step to the last gear you set. The LCD indicates and flashing "1" for the 1st gear setting; select the bike's 1st gear and let the clutch out, run the engine at between 2,000 and 4,000rpm and fix speed and RPM about 5 seconds until the "-" flashing, press MODE button to confirm 1st gear setting and jump to the 2nd gear setting screen.
5. The LCD indicates and flashing "2" for the 2nd gear setting; select the 2nd gear and let the clutch out, run the engine at between 2,000 and 4,000 rpm and fix speed and RPM about 5 seconds until the "-" flashing, press MODE button to confirm the 2nd gear setting and jump to the 3rd gear setting screen.
6. Go on the same process gear by gear until the last gear setting, press MODE to confirm the last gear setting and return to main screen mode and finish the gear indicator setting.

Please refer to the data book at http://www.acewell-meter.com/, find brand, model and year of your bike to get the relative gear ratio and input the data to the computer.

1. Press and hold MODE button for 2 seconds at the digital RPM screen to go into the total number of gears setting screen.
2. In gear indicator setting screens, each press RESET button to add the flashing digit by 1, press MODE button to confirm the digit setting and jump to next digit or next setting screen to be set.
3. Setting step by step, setting the numbers of gear firstly, 1st, 2nd, 3rd gear...etc. Press MODE button for 2 seconds when finish the last gear setting and go to main screen.